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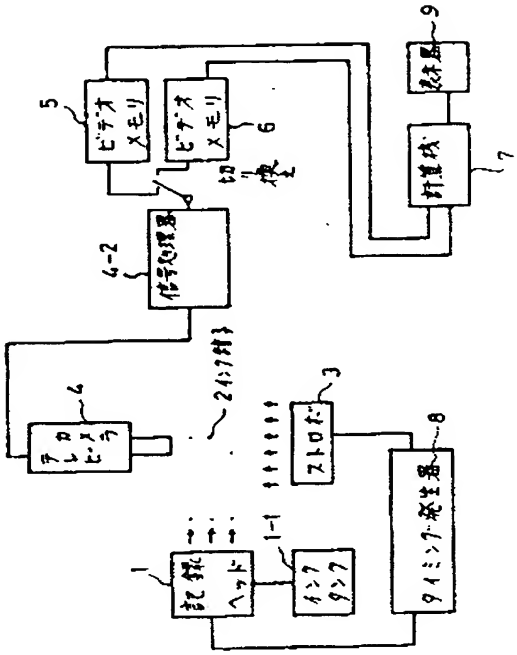
TITLE : SPEED MEASURING SYSTEM OF FLYING INK PARTICLE



ABSTRACT : PURPOSE: To measure the speed of a flying ink particle with high accuracy and improve measuring efficiency, by calculating the flying speed of the ink particle with the use of an image data of the ink particle obtained through radiation of strobe light and stored in a first video memory and an image data of the same ink particle obtained a slight time later and stored in a second video memory.

CONSTITUTION: CCD is used for a video camera since ink particles jetted out all at once from many jet ports of a recording head 1 can be simultaneously photographed by the CCD. The data photographed by CCD is converted into analog signals by a signal processing device 4-2, and stored in a video memory 5 first. A short time later, a strobe 3 is lighted again and data of the same ink particles photographed earlier is converted into analog signals for storing in a video memory 6. A calculator 7 calculates the speed of the ink particles based on the moving distance of the ink particles obtained from the data stored in the video memories 5 and 6, and the above short time length spent for the movement of the ink particles, to detect whether or not the recording head is in proper state, the result of which is indicated by an indicator 9.